

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION III

841 Chestnut Building
Philadelphia, Pennsylvania 19107

SUBJECT:

RCRA Review of RI/FS Documents
Chem-Solv, Inc., Site, Cheswold, DE

DATE: 11/13/90

FROM:

Stephanie Dehnhard, RPM
DE/MD Section (3HW25) *SD*

TO:

Wayne Naylor, Chief
UST Section (3HW63)

THRU:

Peter Ludzia, Acting Chief
DE/MD Section (3HW25) *PL*

Attached is a brief summary of the Chem-Solv, Inc. Site in Cheswold, DE. The Remedial Investigation is nearly complete and a draft RI Report was submitted in July 1990. During the course of the RI, fuel contaminants such as benzene, toluene, and xylene were detected in groundwater samples taken in monitoring wells downgradient of the site. The major contaminant of concern at the site, TCE, has also been detected in groundwater samples downgradient but has not migrated at such a distance as the BTX contaminants have been found.

Recently, the DE UST/LUST programs have located files on several USTs in the area of the site, some of which were leaking when removed. Some USTs probably remain in place. We have made the decision, based on this information and on the historical contamination pattern in the area, that these fuel contaminants are not site-related.

To be sure that any RCRA concerns at this site are addressed early in the Superfund process, I would like to meet with the appropriate RCRA personnel to discuss this site. Perhaps someone in your organization should review the RI and FS reports also. Please contact me at x3167 to advise me of RCRA's interest in this matter.

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National Priorities List Site

Hazardous waste site listed under the
Comprehensive Environmental Response, Compensation, and Liability Act
of 1980 (CERCLA) ("Superfund")

CHEM-SOLV, INC.
Cheswold, Delaware

Background

Chem-Solv, Inc., located in Cheswold, Kent County, Delaware, on the west side of U.S. Route 13 just south of DE Route 42 and 4 miles north of Dover, operated a small solvent recovery facility on the southern one-third of the 1.5 acre property from 1982 to 1984. The company collected waste solvents which are amenable to purification and recovery by distillation. The purified solvents were then returned to the original waste generator. The wastes produced in the process, primarily still sludges, were stored in 55 gallon drums on a concrete pad on-site.

Chem-Solv, Inc. was owned and operated by Mr. Thomas Jaggers and Mr. Eugene Erbes who leased the property on which the facility was located. Mr. Irvin F. Simon of Smyrna, Delaware, has owned the property on which Chem-Solv, Inc. operated since 1972. The property is surrounded by farmland, residential developments, and commercial businesses.

On September 7, 1984, an explosion and fire at the site destroyed the two stills at Chem-Solv, Inc. At the time of the fire, witnesses observed fluids flowing south and off the concrete pad on which the waste drums and stills were located, and into the soil. On September 21, 1984, and again on January 31, 1985, the Delaware Department of Natural Resources and Environmental Control (DNREC) issued orders under State law calling for the company to immediately cease operations, monitor ground water, and remove all contaminated soil. The company failed to take action in the cleanup of the site and abandoned the operation of the waste solvent recovery business shortly thereafter.

Subsequent investigations conducted by DNREC found that organic chemicals consisting primarily of trichloroethylene (TCE), 1,1,1-trichloroethane (TCA), 1,2-dichloroethane, 1-chloroethylene, ethylbenzene, and toluene had contaminated the soil in the area immediately surrounding the drum storage pad. On September 27, 1984, DNREC installed five observation wells in the upper part of the water table aquifer around the site. Sentry wells were installed between Chem-Solv and adjacent domestic wells during the week of November 25, 1984. Initial analysis showed that the groundwater beneath the site was heavily contaminated with synthetic organic compounds. Hydrogeologic studies conducted by DNREC indicated that these contaminants are moving with the groundwater to the northeast across Rt 13.

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Chem-Solv site is underlain by the Columbia Formation, a water table aquifer that may be partially divided by a silty clay confining layer. The continuity of this layer has not yet been determined. Lower levels of contamination have been detected in the deeper intermediate zone. Below the Columbia Formation lies the Cheswold Aquifer of the Dover area. A determination has not yet been made as to whether the Columbia formation in the immediate vicinity of the site is a recharge area for the Cheswold Aquifer. There are approximately twelve houses within 1000 feet of and downgradient of the Chem-Solv site and a population of approximately one to two thousand within a three mile radius. The entire area relies on groundwater for its drinking water supply.

In September 1985, DNREC excavated approximately 1300 cubic yards of contaminated soil in the spill area to the depth of the water table, approximately six to twelve feet below grade, and conducted a soil shredding operation to reduce the volatile organic contaminants present. After reaching clean-up standards of 20-30 ppb TCE, the soil was returned to the excavation pit. A groundwater recovery system with air stripper was also installed in December of 1985 in order to recover and treat the volatile organics in the upper Columbia Aquifer. This system operated intermittently for about three years until September 1988 when the air stripping tower was accidentally destroyed. The system is currently shut down. In addition, one domestic well near the site was found to be contaminated with volatile organics and was replaced by a deeper well under the direction of DNREC in May of 1987.

There are no critical environments within two miles of the Chem-Solv site. The closest surface water, the Alston Branch of the Leipsic River, is 0.5 miles to the northeast of the site. Water has not been degraded.

Current Status

The site was proposed to the National Priorities List on Update 6 in June of 1988.

A Consent Order requiring the PRPs to conduct the RI/FS was signed September 23, 1988, by 21 PRPs, EPA, and the state of Delaware. The state of Delaware has been designated as the lead agency responsible for oversight of the Remedial Investigation and Feasibility Study. After work plan approval in November 1989, field work for the RI/FS began December 4, 1989.

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